

1.2 Investigate

Simulate the Spread of Disease

Name _____

Hour _____ Date _____

Read the top half of p. 11.

When do scientists use simulations in their investigations?



Procedure

Read through the procedures on the bottom of p. 4. Follow your teacher's instructions to conduct the investigation.

After the procedure, answer the following questions:

- a. What happened to your liquid?
- b. Were you infected, or did the disease miss you?
- c. Who do you think was the initial carrier?

Recording Your Data

Read this section on p. 12 and complete the Liquid Interactions Table.



Reflect

1. How easy was it for you to fill in the data table?
2. How reliable do you think your data is?
3. Can you identify the initial carrier now?
4. If you were to repeat the activity, what could you do to improve your data collection?

Procedure: Repeat the Simulation

Read the instructions on p. 13 and repeat the procedure. As a class, figure out who was the initial carrier.

Stop and Think

1. It is possible to begin finding the initial carrier by looking at whose cups are not infected? How can you eliminate others?
2. Who do you think was the initial carrier? Why? What made the person easier to find this time?
3. Which cup(s) can you rule out as being the one that first had the disease? How do you know?

4. Now that you have finished the activity, how would you explain how a disease spreads through a community?
5. This investigation was a simulation. How do you think this investigation is like spreading a real disease? How do you think it is different from what happens in real life?

Be a Scientist: Models and Simulations



Read p. 14. Give an example of a model and explain how it is used in science.

A globe is one example of a model.
In what ways are globes similar to the Earth?

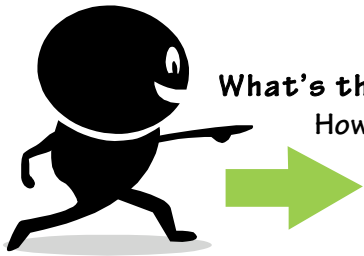
What are some limitations of using a globe to study Earth?

Epidemiology

Read through this paragraph on p. 15.

How did you act like epidemiologists in today's activity?

Who was the sentinel case?



What's the Point?

How did the class simulation demonstrate how diseases are spread?